

**EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH****CERN/PS 2002-001 (DR)****22/01/2002****PS Division Reports****January - December 2001****CERN/PS 2001-001 (DR)****PS Division Reports, January - December 2000**

Edited by S.L. Neboux

**CERN/PS 2001-002 (AE), CLIC Note 469****Machine-Detector Interface at CLIC**

D. Schulte

*Linear Collider Workshop, 24-28 October 2000, Fermi National Accelerator Laboratory, Batavia, USA***CERN/PS 2001-003 (PP), NuFact Note 063****Neutrino Factory Plans at CERN**

J.A. Riche (for the Neutrino Factory Group)

**CERN/PS 2001-004 (RF)****Multiple Bunch-Splitting in the PS : Results and Plans**

R. Garoby

*11th Chamonix Workshop, January 15-19, 2001, Chamonix, France***CERN/PS 2001-005 (DR)****PS Division Annual Report 2000**

Edited by B.W. Allardyce

**CERN/PS 2001-006 (AE)****A Low Beta Insertion in the PS-SPS Transfer Line to Limit Emittance Blow-Up due to Stripping of Lead Ions for LHC**

L. Durieu, M. Martini, S. Maury, D. Möhl, A.-S. Müller

**CERN/PS 2001-007 (RF), NuFact Note 074****Current Activities for a Neutrino Factory at CERN**

R. Garoby for the Neutrino Factory Working Group

*18th International Conference on High Energy Accelerators, HEACC'2001, 26-30 March 2001, Tsukuba, Japan***CERN/PS 2001-008 (AE), CLIC Note 473****Achievements and Future Plans of CLIC Test Facilities**

H.H. Braun for the CLIC Study Team

*18th International Conference on High Energy Accelerators (HEACC 2001), 26-30 March 2001, Tsukuba, Japan***CERN/PS 2001-009 (AE), CLIC Note 475****High-power Testing of 30 GHz Accelerating Structures at the CLIC Test Facility (CTFII)**

H. H. Braun, S. Doebert, L. Groening, I. Wilson, W. Wuensch, F. Zhou

*2nd IEEE International Vacuum Electronics Conference, IVEC 2001, 2-4 April 2001, Noordwijk, Netherlands.*

**CERN/PS 2001-010 (AE)**

**Control of Coherent Instabilities by Linear Coupling**

R. Cappi, E. Métral, D. Möhl

*18th International Conference on High Energy Accelerators (HEACC 2001), 26-30 March 2001, Tsukuba, Japan*

**CERN/PS 2001-011 (DR)**

**Performance of the LHC Pre-Injector**

M. Benedikt, R. Cappi, M. Chanel, R. Garoby, M. Giovannozzi, S. Hancock, M. Martini, E. Métral, G. Métral, K. Schindl, J.-L. Vallet

*18th International Conference on High Energy Accelerators (HEACC 2001), 26-30 March 2001, Tsukuba, Japan*

**CERN/PS 2001-012 (DR)**

**Beam Diagnostics for Accelerators**

H. Koziol

*Course given at the CERN Accelerator School, Loutraki, Greece, October, 2000*

**CERN/PS 2001-013 (AE)**

**Description of Beam-Matter Interaction in the Covariance Matrix Formalism - Application to Modification of Emittance and Twiss Parameters**

A.-S. Müller

**CERN/PS 2001-014 (OP)**

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A. Jansson

**CERN/PS 2001-015 (AE)**

**Novel Method for Multi-Turn Extractions : Trapping Charged Particles in Islands of Phase Space**

R. Cappi, M. Giovannozzi

*Submitted to Physical Review Letters*

**CERN/PS 2001-016 (BD)**

**Antiproton Beam Parameters Measurement by a New Digital Receiver-Based System**

M.E. Angoletta

**CERN/PS 2001-017 (RF)**

**Techniques of Stochastic Cooling**

F. Caspers

*Beam Cooling and Related Topics Workshop, 14-18 May 2001, Bad Honnef, Germany*

**CERN/PS 2001-018 (PO), CLIC Note 478**

**Klystron-Modulators for the 3 TeV CLIC Scheme - an Overview**

P. Pearce

*5th Modulator-Klystron Workshop, MDK2001, CERN, 26-27 April 2001*

**CERN/PS 2001-019 (AE), CERN-SL 2001-047 (OP)**

**Analysis and Measurement of Coupling Effects in the Transfer Line from PS to SPS for the LHC Proton Beam**

G. Arduini, Y. Chao, M. Giovannozzi, J. Klem, D. Manglunki, M. Martini

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-020 (AE)**

**Electron Cloud Effects in the CERN PS**

R. Cappi, M. Giovannozzi, E. Métral, G. Métral, F. Zimmermann

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-021 (AE)**

**Beam Cooling : Past, Present and Future**

D. Möhl

*Beam Cooling and Related Topics Workshop, Bad Honnef, Germany, 13-18 May 2001*

**CERN/PS 2001-022 (PO), CLIC Note 479**

**Design Proposal for a Compact, Solid-state, Low-power Klystron-Pulser for CTF3**

P. Pearce

*IEEE Pulsed Power 2001 Symposium, The Royal College of Physicians, London, 1-2 May 2001*

**CERN/PS 2001-023 (CO), CERN/SL 2001-044 (CO)**

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P. Alvarez, S. Deghaye, A. Gagnaire, W. Heinze, J. Serrano

*12th IEEE-NPSS Real Time Conference, RT2001, Valencia, Spain, 4-8 June 2001*

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J. Borburgh, M. Hourican, M. Thivent

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-025 (PO)**

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R. de la Calle, R. Garcia Gil, L. Rinaldi, F. Völker

*SAAEI'2001, Seminario Anual de Automatic, Matanzas, Cuba, 17-19 September 2001*

**CERN/PS 2001-026 (OP)**

**A Non-Invasive Single-Bunch Matching and Emittance Monitor for the CERN PS Based on Quadrupole Pick-Ups**

A. Jansson, L. Søby

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-027 (AE), CLIC Note 480**

**Recent Experiments on the Effect of Coherent Synchrotron Radiation on the Electron Beam Effect of CTF II**

M. Borland, H.H. Braun, S. Doebert, L. Groening, A. Kabel

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-028 (AE), CLIC Note 482**

**Simulation Package based on PLACET**

E. D'Amico, G. Guignard, N. Leros, D. Schulte

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-029 (AE), CLIC Note 483**

**Dynamic Effects in the Main Linac of CLIC**

N. Leros, D. Schulte

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-030 (AE), CLIC Note 485**

**An Overview of the New CLIC Test Facility (CTF3)**

R. Corsini for the CTF3 Study Team

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-031 (RF), CLIC Note 488**

**Network Representation of Multi-Cell Accelerating Structures**

J-Y Raguin

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-032 (AE), CLIC Note 486**

**Beam Dynamics for the Preliminary Phase of the New CLIC Test Facility (CTF3)**

R. Corsini, A. Ferrari, L. Rinolfi, T. Risselada, P. Royer, F. Tecker.

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-033 (PP), CLIC Note 487**

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E. Bente, H.H. Braun, E. Chevallay, S. Hutchins, P. Legros, I.N. Ross, G. Suberlucq, H. Trautner

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-034 (OP)**

**New Layout of the Rings for the 0.5 MW / 10 Hz / 50 Hz AUSTRON Spallation Source**

M. Benedikt, P. Bryant, M. Regler, H. Schönauer

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-035 (AE)**

**Fast High-Intensity Single-Bunch Transverse Coherent Instability in Synchrotrons due to a Broad-Band Resonator Impedance**

E. Métral

**CERN/PS 2001-036 (AE)**

**A Low- $\beta$  Stripping Insertion in the CERN PS to SPS Transfer Line for the LHC Ion Programme**

M. Giovannozzi, M. Martini, A.-S. Müller

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-037 (AE)**

**Optic Studies for the T9 Beam Line in the CERN PS East Area Secondary Beam Facility**

L. Durieu, M. Martini, A.-S. Müller

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-038 (AE), CLIC Note 484, CERN-SL-2001-043(AP)**

**The Crossing Angle in CLIC**

D. Schulte, F. Zimmerman

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-039 (RF), CLIC Note 481**

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E. Jensen, I. Syratchev, W. Wuensch

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-040 (AE)**

**Experimental Investigation of Impact-Induced Molecular Desorption by 4.2 MeV/u Pb Ions.**

M. Chanel, J. Hansen, J.-M. Laurent, N. Madsen, E. Mahner

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-041 (AE), CERN/SL 2001-032**

**Increasing the Proton Intensity of PS and SPS**

R. Cappi (Editor), K. Cornelis, J.P. Delahaye, R. Garoby, H. Haseroth, K. Hübner, T. Linnecar, S. Myers, K. Schindl, C. Wyss

**CERN/PS 2001-042 (AE)**

**Optics for the Antiproton Decelerator at CERN**

P. Beloshitskii, C. Carli, S. Maury, D. Möhl, F. Pedersen

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-043 (PO)**

**Proceedings of the Fifth Modulator-Klystron Workshop MDK2001**

Edited by T. Kehrer

*CERN, Geneva, Switzerland, 26 - 27 April 2001*

**CERN/PS 2001-044 (BD)**

**The New Digital-Receiver-Based System for Antiproton Beam Diagnostics**

M.E. Angoletta, V. Chohan, M. Ludwig, O. Marquversen, F. Pedersen

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-045 (RF), CLIC Note 489**

**Status of CLIC High Gradient Studies**

H. H. Braun, S. Döbert, L. Groening, I. Wilson, W. Wuensch

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-046 (RF), CLIC Note 490**

**Time Domain Simulations of the CLIC PETS (Power Extraction and Transfer Structure) with GdfidL**

W. Bruns, I. Syratchev

*Particle Accelerator Conference 2001, Chicago, Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-047 (AE)**

**Commissioning and First Operation of the Antiproton Decelerator (AD)**

P. Belochitskii, J. Bossert, J. Buttkus, C. Carli, F. Caspers, V. Chohan, D. Cornuet, T. Eriksson, A. Findlay, M. Giovannozzi, B. Holzer, R. Maccaferri, N. Madsen, M. Marchesotti, S. Maury, D. Möhl, S. Pasinelli, F. Pedersen, L. Søby, J. Tan, G. Tranquille

*Particle Accelerator Conference 2001, Chicago Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-048 (BD)**

**Design of a Magnetic Quadrupole Pick-up for the CERN PS**

A. Jansson, L. Søby, D.J. Williams

*DIPAC 2001, 5th European Workshop on Diagnostics and Beam Instrumentation, 13-15 May 2001 - ESRF Grenoble, France*

**CERN/PS 2001-049 (PP), NuFact Note 083**

**Status of Studies for a Muon Cooling Experiment**

K. Hanke

*NuFACT'01 Workshop, International Congress Center, Tsukuba, Ibaraki, Japan, 24-30 May 2001*

**CERN/PS 2001-050 (RF), NuFact Note 084**

**Design of the Superconducting Section of the SPL Linac at CERN**

F. Gerigk, R.D. Ryne, M. Vretenar,

*Particle Accelerator Conference 2001, 18-22 June 2001, Chicago, Illinois, USA*

**CERN/PS 2001-051 (RF), NuFact Note 085**

**Beam Dynamics of Non-Equipartitioned Beams in the Case of the SPL Project at CERN**

F. Gerigk, I. Hofmann

*Particle Accelerator Conference 2001, 18-22 June 2001, Chicago, Illinois, USA*

**CERN/PS 2001-052 (BD)**

**Injection Matching Studies using Turn by Turn Beam Profile Measurements in the CERN PS**

M. Benedikt, C. Carli, C. Dutriat, A. Jansson, M. Giovannozzi, M. Martini, U. Raich

*DIPAC 2001, 5th European Workshop on Diagnostics and Beam Instrumentation, 13-15 May 2001 - ESRF Grenoble, France*

**CERN/PS 2001-053 (BD)**

**Beam Measurement Systems for the CERN Antiproton Decelerator (AD)**

M. Angoletta, V. Chohan, M. Ludwig, O. Marquerssen, P. Odier, F. Pedersen, U. Raich, L. Søby, T. Spickermann, G. Tranquille

*Particle Accelerator Conference 2001, Chicago Illinois, USA, 18-22 June 2001*

**CERN/PS 2001-054 (AE)**

**Ion Accumulation for LHC**

M. Chanel

*Beam Cooling and Related Topics Workshop, 13-18 May 2001 Bad Honnef, Germany*

**CERN/PS 2001-055 (RF), NuFact Note 089**

**Status of European Studies for a Neutrino Factory at CERN**

R. Garoby (for the Neutrino Factory Working Group)

*NuFACT'01 Workshop, May 24-30, 2001, Tsukuba, Japan*

**CERN/PS 2001-056 (BD)**

**Optimum Parameters for Electron Cooling**

G. Tranquille

*Beam Cooling and Related Topics Workshop, 13-18 May 2001 Bad Honnef, Germany*

**CERN/PS 2001-057 (AE), CLIC Note 499**

**Progress on the CLIC Linear Collider Study**

G. Guignard for the CLIC Study Team

*Second Asian Particle Accelerator Conference APAC 01, Beijing, China, September 17-21, 2001*

**CERN/PS 2001-058 (AE), NuFact Note 093**

**Ionisation Cooling in FFAG's**

H. Schönauer

*NuFact'01, Tsukuba, Japan, 24-30 May, 2001*

**CERN/PS 2001-059 (PP)**

**Simulation of the Pion Decay Channel of a Neutrino Factory**

E.B. Holzer

*NuFact'01, Tsukuba, Japan, 24-30 May, 2001*

**CERN/PS 2001-060 (PP)**

**Studies on ECR4 for the CERN Ion Programme**

C.E. Hill, D. Kuchler, R. Scrivens, F. Wenander

*9th International Conference on Ion Sources, Oakland, USA, September 3-7.9.2001*

**CERN/PS 2001-061 (PP)**

**Comparison of Simulation Codes for the Beam Dynamics of Low-Energy Ions**

K. Hanke, S. Heising, G. Probert, R. Scrivens

*9th International Conference on Ion Sources, Oakland, USA, September 3-7.9.2001*

**CERN/PS 2001-062 (AE), CLIC Note 500**

**Higgs Physics with a  $\gamma\gamma$  Collider Based on CLIC 1**

D. Asner, H. Burkhardt, A. De Roeck, J. Ellis, J. Gronberg, S. Heinemeyer, M. Schmitt, D. Schulte, M. Velasco, F. Zimmermann

*APS/DPF/DPB Summer Study on the Future of Particle Physics (Snowmass 2001), Snowmass, Colorado, 30 June-21 July 2001*

**CERN/PS 2001-063 (AE)**

**Stability Criterion for the Longitudinal Mode-Coupling Instability in the Presence of Both Space-Charge and Resonator Impedances**

E. Métral

**CERN/PS 2001-064 (PP)**

**First Operating Experience with the CERN Decelerating RFQ for Antiprotons**

Y. Bylinsky, A.M. Lombardi, W. Pirkel

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J. Bosser, E. Bravin, R. Maccaferri, M.A. Plum

*To be submitted to Nuclear Instruments and Methods*

**CERN/PS 2001-066 (AE)**

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E. Métral

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**Characteristics of Full-Cell Terminated RF Structures: Results of Analogue Studies**

Stan O. Schriber

**CERN/PS 2001-068 (CO)**

**A Framework for JAVA Application Programs in the CERN PS Control System**

M. Arruat, J. Cuperus, M. Gourber-Pace, R. Hoh, E. Roux

ICALEPCS 2001, San José, CA, U.S.A., 27-30.11.2001

**CERN/PS 2001-069 (CO)**

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J. Allard, O. Jonsson, F. Locci, G. Mornacchi

ICALEPCS 2001, San José, CA, U.S.A., 27-30.11.2001

**CERN/PS 2001-070 (CO) CERN/SL 2001-068 (CO)**

**Remote Device Access in the New CERN Accelerator Controls Middleware**

V. Baggiolini, F. di Maio, S. Jensen, K. Kostro, A. Risso, N. Trofimov

ICALEPCS 2001, San José, CA, U.S.A., 27-30.11.2001

**CERN/PS 2001-071 (PP)**

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Stan O. Schriber

**CERN/PS 2001-072 (RF), CTF3 Note 039 (Tech.)**

**CTF3 Design Report - Preliminary Phase**

D. Allard, B. Bartholome, M. Bernard, J.P. Bertuzzi, G. Bienvenu, R. Bonzano, R. Bossart, H. Braun, E. Bravin, J. Borburgh, J. Buttke, R. Chaput, E. Chazarenc, V. Chohan, J.J. Cloye, R. Corsini, G. Coudert, M. Damiani, S. Deghaye, J.P. Delahaye, F. Di Maio, T. Dobers, P. Dubief, B. Dupuy, L. Durieu, A. Ferrari, T. Garvey, G. Geschonke, J. Hansen, H. Hellgren, M. Hourican, M. Lamidon, J. Le Duff, T. Lefevre, J.H. Lewis, J. Lindroos, E. Mahner, G. McMonagle, J. Monteiro, B. Mouton, J. Mourier, P. Odier, T. Otto, P. Pearce, R. Pittin, M. Poehler, J-P. Potier, U. Raich, M. Rettig, L. Rinolfi, T. Risselada, R. Riva, G. Rossat, P. Royer, L. Sermeus, K. Setas, G. Simonet, J.P.H. Sladen, L. Søby, L. Tanner, F. Tecker, J.C. Thomi, I. Wilson, G. Yvon

**CERN/PS 2001-073 (AE)**

**Creation of Hollow Bunches using a Double Harmonic RF System**

C. Carli

**CERN/PS 2001-074 (AE), CLIC Note 502**

**Update of the Status of Machine Detector Interface Studies for CLIC**

D. Schulte

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